

2. At least one accessible route from an accessible building entrance to primary function areas.
3. Signage complying with Section 1110.
4. Accessible parking, where parking is being provided.
5. At least one accessible passenger loading zone, when loading zones are provided.
6. At least one accessible route connecting accessible parking and accessible passenger loading zones to an accessible entrance.

Where it is technically infeasible to comply with the new construction standards for any of these requirements for a change of group or occupancy, the above items shall conform to the requirements to the maximum extent technically feasible. Change of group or occupancy that incorporates any alterations or additions shall comply with this section and Sections 3409.4, 3409.5, 3409.6 and 3409.7.

**3409.4 Additions.** Provisions for new construction shall apply to additions. An addition that affects the accessibility to, or contains an area of primary function, shall comply with the requirements in Section 3409.6 for accessible routes.

**3409.5 Alterations.** A building, facility or element that is altered shall comply with the applicable provisions in Chapter 11 and ICC A117.1, unless technically infeasible. Where compliance with this section is technically infeasible, the alteration shall provide access to the maximum extent technically feasible.

**Exceptions:**

1. The altered element or space is not required to be on an accessible route, unless required by Section 3409.6.
2. Accessible means of egress required by Chapter 10 are not required to be provided in existing buildings and facilities.

**3409.5.1 Extent of application.** An alteration of an existing element, space or area of a building or facility shall not impose a requirement for greater accessibility than that which would be required for new construction.

Alterations shall not reduce or have the effect of reducing accessibility of a building, portion of a building or facility.

**3409.6 Alterations affecting an area containing a primary function.** Where an alteration affects the accessibility to, or contains an area of primary function, the route to the primary function area shall be accessible. The accessible route to the primary function area shall include toilet facilities or drinking fountains serving the area of primary function.

**Exceptions:**

1. The costs of providing the accessible route are not required to exceed 20 percent of the costs of the alterations affecting the area of primary function.
2. This provision does not apply to alterations limited solely to windows, hardware, operating controls, electrical outlets and signs.
3. This provision does not apply to alterations limited solely to mechanical systems, electrical systems, in-

stallation or alteration of fire protection systems and abatement of hazardous materials.

4. This provision does not apply to alterations undertaken for the primary purpose of increasing the accessibility of an existing building, facility or element.

**3409.7 Scoping for alterations.** The provisions of Sections 3409.7.1 through 3409.7.11 shall apply to alterations to existing buildings and facilities.

**3409.7.1 Entrances.** Accessible entrances shall be provided in accordance with Section 1105.

**Exception:** Where an alteration includes alterations to an entrance, and the building or facility has an accessible entrance, the altered entrance is not required to be accessible, unless required by Section 3409.6. Signs complying with Section 1110 shall be provided.

**3409.7.2 Elevators.** Altered elements of existing elevators shall comply with ASME A17.1 and ICC A117.1. Such elements shall also be altered in elevators programmed to respond to the same hall call control as the altered elevator.

**3409.7.3 Platform lifts.** Platform (wheelchair) lifts complying with ICC A117.1 and installed in accordance with ASME A18.1 shall be permitted as a component of an accessible route.

**3409.7.4 Stairs and escalators in existing buildings.** In alterations where an escalator or stair is added where none existed previously, an accessible route shall be provided in accordance with Sections 1104.4 and 1104.5.

**3409.7.5 Ramps.** Where steeper slopes than allowed by Section 1010.2 are necessitated by space limitations, the slope of ramps in or providing access to existing buildings or facilities shall comply with Table 3409.7.5.

**TABLE 3409.7.5  
RAMPS**

SLOPE	MAXIMUM RISE
Steeper than 1:10 but not steeper than 1:8	3 inches
Steeper than 1:12 but not steeper than 1:10	6 inches

For SI: 1 inch = 25.4 mm.

**3409.7.6 Performance areas.** Where it is technically infeasible to alter performance areas to be on an accessible route, at least one of each type of performance area shall be made accessible.

**3409.7.7 Dwelling or sleeping units.** Where I-1, I-2, I-3, R-1, R-2 or R-4 dwelling or sleeping units are being altered or added, the requirements of Section 1107 for Accessible or Type A units and Chapter 9 for accessible alarms apply only to the quantity of spaces being altered or added.

**3409.7.8 Jury boxes and witness stands.** In alterations, accessible wheelchair spaces are not required to be located within the defined area of raised jury boxes or witness stands and shall be permitted to be located outside these spaces where the ramp or lift access restricts or projects into the means of egress.

**3409.7.9 Toilet rooms.** Where it is technically infeasible to alter existing toilet and bathing facilities to be accessible, an accessible unisex toilet or bathing facility is permitted. The

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unisex facility shall be located on the same floor and in the same area as the existing facilities.

**3409.7.10 Dressing, fitting and locker rooms.** Where it is technically infeasible to provide accessible dressing, fitting or locker rooms at the same location as similar types of rooms, one accessible room on the same level shall be provided. Where separate-sex facilities are provided, accessible rooms for each sex shall be provided. Separate-sex facilities are not required where only unisex rooms are provided.

**3409.7.11 Check-out aisles.** Where check-out aisles are altered, at least one of each check-out aisle serving each function shall be made accessible until the number of accessible check-out aisles complies with Section 1109.12.2.

**3409.7.12 Thresholds.** The maximum height of thresholds at doorways shall be  $\frac{3}{4}$  inch (19.1 mm). Such thresholds shall have beveled edges on each side.

**3409.8 Historic buildings.** These provisions shall apply to buildings and facilities designated as historic structures that undergo alterations or a change of occupancy, unless technically infeasible. Where compliance with the requirements for accessible routes, ramps, entrances or toilet facilities would threaten or destroy the historic significance of the building or facility, as determined by the authority having jurisdiction, the alternative requirements of Sections 3409.8.1 through 3409.8.5 for that element shall be permitted.

**3409.8.1 Site arrival points.** At least one accessible route from a site arrival point to an accessible entrance shall be provided.

**3409.8.2 Multilevel buildings and facilities.** An accessible route from an accessible entrance to public spaces on the level of the accessible entrance shall be provided.

**3409.8.3 Entrances.** At least one main entrance shall be accessible.

**Exceptions:**

1. If a main entrance cannot be made accessible, an accessible nonpublic entrance that is unlocked while the building is occupied shall be provided; or
2. If a main entrance cannot be made accessible, a locked accessible entrance with a notification system or remote monitoring shall be provided.

Signs complying with Section 1110 shall be provided at the primary entrance and the accessible entrance.

**3409.8.4 Toilet and bathing facilities.** Where toilet rooms are provided, at least one accessible toilet room complying with Section 1109.2.1 shall be provided.

**3409.8.5 Ramps.** The slope of a ramp run of 24 inches (610 mm) maximum shall not be steeper than one unit vertical in eight units horizontal (12-percent slope).

**[EB] SECTION 3410  
COMPLIANCE ALTERNATIVES**

**3410.1 Compliance.** The provisions of this section are intended to maintain or increase the current degree of public

safety, health and general welfare in existing buildings while permitting repair, alteration, addition and change of occupancy without requiring full compliance with Chapters 2 through 33, or Sections 3401.3, and 3403 through 3407, except where compliance with other provisions of this code is specifically required in this section.

**3410.2 Applicability.** Structures existing prior to [DATE TO BE INSERTED BY THE JURISDICTION. NOTE: IT IS RECOMMENDED THAT THIS DATE COINCIDE WITH THE EFFECTIVE DATE OF BUILDING CODES WITHIN THE JURISDICTION], in which there is work involving additions, alterations or changes of occupancy shall be made to conform to the requirements of this section or the provisions of Sections 3403 through 3407. The provisions in Sections 3410.2.1 through 3410.2.5 shall apply to existing occupancies that will continue to be, or are proposed to be, in Groups A, B, E, F, M, R, S and U. These provisions shall not apply to buildings with occupancies in Group H or I.

**3410.2.1 Change in occupancy.** Where an existing building is changed to a new occupancy classification and this section is applicable, the provisions of this section for the new occupancy shall be used to determine compliance with this code.

**3410.2.2 Partial change in occupancy.** Where a portion of the building is changed to a new occupancy classification, and that portion is separated from the remainder of the building with fire barrier wall assemblies having a fire-resistance rating as required by Table 302.3.2 for the separate occupancies, or with approved compliance alternatives, the portion changed shall be made to conform to the provisions of this section.

Where a portion of the building is changed to a new occupancy classification, and that portion is not separated from the remainder of the building with fire separation assemblies having a fire-resistance rating as required by Table 302.3.2 for the separate occupancies, or with approved compliance alternatives, the provisions of this section which apply to each occupancy shall apply to the entire building. Where there are conflicting provisions, those requirements which secure the greater public safety shall apply to the entire building or structure.

**3410.2.3 Additions.** Additions to existing buildings shall comply with the requirements of this code for new construction. The combined height and area of the existing building and the new addition shall not exceed the height and area allowed by Chapter 5. Where a fire wall that complies with Section 705 is provided between the addition and the existing building, the addition shall be considered a separate building.

**3410.2.4 Alterations and repairs.** An existing building or portion thereof, which does not comply with the requirements of this code for new construction, shall not be altered or repaired in such a manner that results in the building being less safe or sanitary than such building is currently. If, in the alteration or repair, the current level of safety or sanitation is to be reduced, the portion altered or repaired shall conform to the requirements of Chapters 2 through 12 and Chapters 14 through 33.

## REFERENCED STANDARDS

**AITC**

American Institute of Timber Construction  
Suite 140  
7012 S. Revere Parkway  
Englewood, CO 80112

Standard reference number	Title	Referenced in code section number
A 190.1—1992	Structural Glued Laminated Timber .....	2303.1.3, 2306.1
Technical Note 7—1996	Calculation of Fire Resistance of Glued Laminated Timbers .....	721.6.3.3
104—84	Typical Construction Details .....	2306.1
110—01	Standard Appearance Grades for Structural Glued Laminated Timber .....	2306.1
112—93	Tongue-and-Groove Heavy Timber Roof Decking .....	2306.1
113—01	Dimensions of Structural Glued Laminated Timber .....	2306.1
117—01	Standard Specifications for Structural Glued Laminated Timber of Softwood Species— Design Requirements—Standard Specifications for Structural Glued Laminated Timber of Softwood Species—Manufacturing Requirements .....	2306.1
119—96	Standard Specifications for Structural Glued Laminated Timber of Hardwood Species .....	2306.1
200—92	Inspection Manual .....	2306.1
500—91	Determination of Design Values for Structural Glued Laminated Timber .....	2306.1

**ALI**

Automotive Lift Institute  
P.O. Box 33116  
Indialantic, FL 32903-3116

Standard reference number	Title	Referenced in code section number
ALCTV—98	Standard for Automotive Lifts—Safety Requirements for Construction, Testing and Validation .....	3001.2

**ANSI**

American National Standards Institute  
25 West 43rd Street, Fourth Floor  
New York, NY 10036

Standard reference number	Title	Referenced in code section number
A 13.1—96	Scheme for the Identification of Piping Systems .....	415.9.6.4
A 42.2—71	Portland Cement and Portland Cement Lime Plastering, Exterior (Stucco) and Interior .....	2109.8.4.6
A 42.3—71	Lathing and Furring for Portland Cement and Portland Cement Lime Plastering, Exterior Stucco and Interior .....	2109.8.4.6
A108.1A—99	Installation of Ceramic Tile in the Wet-set Method, with Portland Cement Mortar .....	2103.9
A108.1B—99	Installation of Ceramic Tile, Quarry Tile on a Cured Portland Cement Mortar Setting Bed with Dry-set or Latex-Portland Mortar .....	2103.9
A108.4—99	Installation of Ceramic Tile with Organic Adhesives or Water Cleanable Tile-setting Epoxy Adhesive .....	2103.9.7
A108.5—99	Installation of Ceramic Tile with Dry-set Portland Cement Mortar or Latex-Portland Cement Mortar .....	2103.9.1, 2103.9.2, 2103.9.3
A108.6—99	Installation of Ceramic Tile with Chemical Resistant, Water Cleanable Tile-setting-and-grouting Epoxy .....	2103.9.4
A108.7—92	Specification for Electrically Conductive Ceramic Tile Installed with Conductive Dry-set Portland Cement Mortar .....	2103.9.2
A108.8—99	Installation of Ceramic Tile with Chemical Resistant Furan Resin Mortar and Grout .....	2103.9.5
A108.9—99	Installation of Ceramic Tile with Modified Epoxy Emulsion Mortar/Grout .....	2103.9.6
A 108.10—99	Installation of Grout in Tilework .....	2103.9.8
A 118.1—99	Specifications for Dry-set Portland Cement Mortar .....	2103.9.1
A 118.2—99	Specifications for Conductive Dry-set Portland Cement Mortar .....	2103.9.2
A 118.3—99	Specifications for Chemical Resistant, Water Cleanable Tile-setting and -grouting Epoxy and Water Cleanable Tile-setting Epoxy Adhesive .....	2103.9.4
A 118.4—99	Specifications for Latex-portland Cement Mortar .....	2103.9.3
A 118.5—99	Specifications for Chemical Resistant Furan Mortar and Grouts for Tile Installation .....	2103.9.5
A 118.6—99	Specifications for Cement Grouts for Tile Installation .....	2103.9.8
A 118.8—99	Specifications for Modified Epoxy Emulsion Mortar/Grout .....	2103.9.6
A 136.1—99	Specifications for Organic Adhesives for Installation of Ceramic Tile .....	2103.9.7
A 137.1—88	Specifications for Ceramic Tile .....	2103.4
A 208.1—99	Particleboard .....	2303.1.7, 2303.1.7.1

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## REFERENCED STANDARDS

Z 97.1—84 (R1994)

## ANSI—continued

Safety Glazing Materials Used in Buildings—Safety Performance  
Specifications and Methods of Test (Reaffirmed 1994)

2406.1.3, 2406.1.2

## APA

APA - Engineered Wood Association  
P.O. Box 11700  
Tacoma, WA 98411-0700

Standard reference number	Title	Ref
APA PDS	Plywood Design Specification (revised 1998)	section 1
APA PDS Supplement 1—90	Design and Fabrication of Plywood Curved Panels (revised 1995)	2306.1, Table 2306.3.1, 2306.3.2, 2306.3.3
APA PDS Supplement 2—92	Design and Fabrication of Plywood-lumber Beams (revised 1998)	
APA PDS Supplement 3—90	Design and Fabrication of Plywood Stressed-skin Panels (revised 1996)	
APA PDS Supplement 4—90	Design and Fabrication of Plywood Sandwich Panels (revised 1993)	
APA PDS Supplement 5—95	Design and Fabrication of All-plywood Beams (revised 1995)	
EWS R540—96	Builders Tips: Proper Storage and Handling of Glulam Beams	
EWS S475—99	Glued Laminated Beam Design Tables	
EWS S560—99	Field Notching and Drilling of Glued Laminated Timber Beams	
EWS T300—99	Glulam Connection Details	
EWS X440—00	Product Guide-Glulam	
EWS X445—97	Glulam in Residential Construction—Southern Edition	
EWS X450—97	Glulam in Residential Construction—Western Edition	

## ASAE

American Society of Agricultural Engineers  
2950 Niles Road  
St. Joseph, MI 49085-9659

Standard reference number	Title	Referen in c section num
EP 484.2 (1998)	Diaphragm Design of Metal-Clad, Wood-Frame Rectangular Buildings	
EP 486.1 (2000)	Shallow Post Foundation Design	230
EP 559 (1997)	Design Requirements and Bending Properties for Mechanically Laminated Columns	230

## ASCE/SEI

American Society of Civil Engineers  
Structural Engineering Institute  
1801 Alexander Bell Drive  
Reston, VA 20191-4400

Standard reference number	Title	Reference in c section num
3—91	Structural Design of Composite Slabs	
5—02	Building Code Requirements for Masonry Structures	1604.3.3, 2209, 1405.5, 1405.5.3, 1405.9, 1604.3.4, 1704.5, 1704.5.1, 1704.5.2, Table 1703.3.1, 1708.1.1, 1708.1.2, 1708.1.3, 1805.5.2, 1812.7, 2101.2.3, 2101.2.4, 2101.2.5, 2103.11.6, 2106.1, 2106.1.1.1, 2106.1.1.2, 2106.1.1.3, 2106.3, 2106.4, 2106.5, 2106.6, 2107.1, 2107.2, 2107.2.1, 2107.2.2, 2107.2.4, 2107.2.5, 2107.2.6, 2108.1, 2108.2, 2108.4, 2109.1, 2109.2.3.1, 2109.2.3.2
6—02	Specifications for Masonry Structures	1405.5.1, 1405.9.1, Table 1704.5.1, Table 1704.5.3, 1805.5.2, 2103.11.7, 2104.1, 2104.1.1, 2104.3, 1605.1, 1605.2.2, 1605.3.1.2, 1605.3.2, 1608.1, 1608.3, 1608.3.4, 1608.3.5, 1608.4, 1608.5, 1608.6, 1608.7, 1608.8, 1608.9, 1609.1.1, 1609.1.4.1, 1609.3, Table 1609.3.1, 1609.7.3, 1612.2, 1614.1, 1616.1, 1616.3, 1616.4.5, 1616.5, Table 1616.5.1.1, Table 1616.5.1.2, 1616.6, 1617.1, 1617.2, 1617.2.1, 1617.2.2.2, 1617.3, 1617.4, 1617.6, 1617.6.1, 1617.6.1.1, 1618.1, 1619, 1620.1, 1620.1.1, 1620.1.2, 1620.1.3, 1620.2.1, 1620.2.7, 1620.3.1, 1621.1, 1621.1.1, 1621.1.2, 1621.1.3, 1622.1, 1622.1.1, 1622.1.2, 1622.1.3, 1623.1, 1623.1.1
7—02	Minimum Design Loads for Buildings and Other Structures	

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